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PIN11

COSTS OF QUANTIFERON TB-GOLD VERSUS TUBERCULIN SKIN TEST IN SPANISH HEALTH CARE WORKERS

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OBJECTIVES: Health care workers are a population at risk of Latent Tuberculosis Infection (LTI), which is usually detected by the Tuberculin Skin Test (TST). In vitro immunological tests such as QuantiFERON-TB Gold® (QFT-G) have been recently recommended for LTI screening in health care workers. We compared direct and indirect costs of two LTI screening strategies among health care workers in Spain: TST and QFT-G. **METHODS:** This was a comparative cost study conducted from a societal perspective, using data on costs and results from a prospective observational study carried out in a Spanish public hospital, where the 2 screening alternatives were concurrently applied to a cohort of 134 health care workers. **RESULTS:** In a base-case analysis, the costs of the QFT-G test amounted €42.5 per screened health care worker and those of the TST €39.5. Both tests varied in their cost structure: in the case of TST, most of the total costs (70%) were indirect costs, basically time spent by the participants, whereas QFT-G was more expensive in terms of fungible material, which meant 50% of the total costs. The results are sensitive to the hourly wages of the participants and to the estimation of the time spent by them in the tests. **CONCLUSIONS:** This cost study showed that, in the conditions of Spanish health care system, the societal costs of the new QFT-G are comparable to those of the TST; however, their cost structures vary considerably. Therefore, these results could change if applied in other countries with different relation between salaries and prices.

PIN12

PSEUDOMONAS AERUGINOSA RELATED BURDEN ON CYSTIC FIBROSIS PATIENTS: COMPARING HEALTH CARE COSTS AND RESOURCE UTILIZATION ACROSS AGE GROUPS

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OBJECTIVES: To determine if the average cost of medical care among cystic fibrosis (CF) patients with Pseudomonas aeru*ginosa* (PA) infection is different across age-groups. **METHODS:** Data were derived from MarketScan claims database, which captures person-specific direct medical utilization, expenditures, and enrollment from approximately 150 payers. a retrospective cross-sectional study design was used. CF subjects with an initial claim for a PA infection were identified using international classification of diseases diagnosis codes of 277.0 and 482.1, respectively. Demographic information from administrative claims and health care utilization and costs from medical and pharmacy claims were extracted for 12 months pre and post initial PA claim. All resource use and costs were annualized and compared across 7 age-groups with parametric (ANOVA) and Duncan's post-hoc tests using SAS version 9.2. **RESULTS:** A total of 347 CF subjects with PA infection met the study criteria with mean age 19.9 (SD: 15.4) years and 47.8% females. a monotonic trend of increasing ($P < 0.05$) overall post period costs was observed across the 7 age-groups. Example, children 0–4 years had the lowest ($P < 0.05$) overall post costs of $31,569 (median = $22,887) vs. $95,024 (median = $36,783) for adults 45–64 years. a similar trend with the exception of age group 30–44, was observed with PA-related costs as well. Mean and median per patient per year PA-related costs were lowest in children 0–4 years ($12,472, $3,572) compared to the oldest age-group of 45–64 years ($26,673, $3,311). In general, total prescription claims and outpatient visits, and PA-related inpatient visits increased with increasing age groups. Among children, PA-related prescription claims were statistically higher. For example, mean PA-related prescription claims were 1.4 vs. 3.8 in the 0–4 vs. 15–19 groups ($P < 0.05$). **CONCLUSIONS:** Overall and PA-related health care resource use and costs tended to vary across age groups. Future research needs to explore the underlying reasons for this trend.

PIN13

LONG-TERM ECONOMIC AND CLINICAL BURDEN OF COMPLICATED INVASIVE MENINGOCOCCAL DISEASE: EVIDENCE FROM A UNITED STATES MANAGED CARE POPULATION

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OBJECTIVES: There is a paucity of data on the long-term (i.e., post-hospital discharge) economic and clinical burden of invasive meningococcal disease (IMD) and its related complications among IMD survivors. The objective of this study was to compare health care utilization and costs between IMD survivors with and without related complications. **METHODS:** We conducted a retrospective cohort analysis of the Ingenix Impact database (1997–2009). Patients with an inpatient admission for IMD (ICD-9-CM: 036.x) and continuous health plan enrollment for ≥6 months before and ≥12 months after the initial IMD hospitalization were selected. Patients were further classified based on the presence (complicated IMD) or absence (uncomplicated IMD) of a diagnosis code for relevant clinical sequelae (identified based on literature review and clinical expertise) during the 12-month follow-up period. Health care utilization and costs (in 2009 US$) incurred during the 12-month follow-up period were compared between patients in the complicated and uncomplicated IMD groups using univariate and multivariable regression analyses. **RESULTS:** Among 343 IMD patients identified, stroke (14.3%), seizure (11.7%) and hearing loss (10.5%) were the most commonly observed complications, with 34.1% experiencing ≥1 complication. Significant differences in health care utilization and costs were observed, with the largest between-group difference in follow-up costs being for inpatient services (mean [95% CI]: $72,512 [$6,439] for complicated cases vs. $24,679 [$1,234] for uncomplicated IMD; $P < 0.001$). Large differences were also observed for rehabilitative services ($24,405 [$21,418] vs. $159 [$116]; $P < 0.05$) and total health care costs ($97,854 [$9,248] vs. $32,239 [$1,611]; $P < 0.001$). Risk of re-hospitalization following discharge from the initial IMD admission was higher among complicated IMD patients (hazard ratio = 1.69 [95% CI] = 1.04–2.74) vs. uncomplicated cases. **CONCLUSIONS:** Driven mainly be the need for repeat hospitalization, the presence of serious complications in cases of IMD increased health care utilization and costs by almost 3 fold compared to uncomplicated cases during 12 months post-diagnosis.

PIN14

COST-OF-ILLNESS OF CANDIDEMIA IN KOREA

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OBJECTIVES: This study sought to estimate the direct medical costs associated treating candidemia in Korea. **METHODS:** This incidence based, cost-of-illness study collected retrospective data of 200 patients in 4 tertiary hospitals. The cost data targeted for adult patients (≥19 years) diagnosed as candidemia through blood culture. We assessed the costs attributable to candidemia by examining resources utilization during candidemia treatment period. The medical costs were calculated by multiplying quantity of resource utilization by unit cost of according resource. **RESULTS:** The enrolled patients were 54.0% male, average 65.3 yrs old. The average length of stay attributable to candidemia was 16.3 days. After 6 weeks follow up, only 2 patients were relapsed, otherwise all-cause mortality rate was 66.0%. The estimated average direct medical costs of candidemia were KRW 4,723,160. The resources consisted of hospitalization (KRW 1,308,521, 27.7%), medication (KRW 1,310,739, 27.8%), lab test (KRW 489,818, 10.4%), imaging test (KRW 157,633, 3.3%), procedure/surgery (KRW 113,774, 2.4%) and other medical treatment (KRW 1,342,675, 28.4%). The main occupied costs were those of hospitalization, medication and when other medical treatment resources (e.g, hemodialysis, blood transfusion) were utilized, the costs tended to sensitively increase. According to admission type, costs for ICU (SICU: n = 24, KRW 8,837,825, MICU: n = 51, KRW 6,914,280) were higher than those for general ward (n = 125), KRW 3,039,167. Analysis by baseline disease/condition revealed that the costs for transplant (n = 8, KRW 10,070,472), HIV/AIDS (n = 2, KRW 25,426,018) were higher than others (cancer: n = 103, KRW 3,658,142, central catheterization: n = 101, KRW 5,554,520, surgery: n = 68, KRW 5,050,941). The costs for C.albicans (n = 90) were KRW 3,878,166 and for non C.albicans (n = 110) were KRW 5,414,518. **CONCLUSIONS:** This study is significant in that it estimated cost-of-illness of candidemia by examining the health resources consumption and assessing the costs attributable to candidemia.

PIN15

THE ECONOMIC BURDEN OF SURGICAL SITE INFECTION USING THERAPEUTIC ANTIBIOTIC UTILIZATION MEASURE—COMPARISON OF TWO TIME PERIODS

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OBJECTIVES: Significant attention is being focused on reducing surgical site infections (SSI) in the US and numerous national initiatives have been put into place to achieve measurable reductions. The purpose of the study was to examine the economic impact of therapeutic antibiotic (TA) utilization as an indicator of postoperative SSI between two time periods. **METHODS:** Premier inpatient database was utilized for assessing length of stay (LOS) and costs. Two time periods identified, 2005–2008 (period 1) and 2009 (period 2) with 1,138,989 patients discharged in 2005–2008 and 305,073 discharged in 2009. The patients with non-SSI nosocomial infections were excluded. TA usage was determined by the antibiotic administration after day 4 of surgery (TA utilization rate: 0.61% in 2005–2008; 0.75% in 2009). Multivariate analysis used to assess the effects of using TA on LOS and total costs outcomes. **RESULTS:** Patients receiving TA had significantly higher LOS and costs for both time periods ($P < 0.001$). Average LOS for patients receiving TA was 12.2 and 12.6 for periods 1 and 2 respectively. Mean post-surgical LOS was 9.8 and 10.0. Patients not receiving TA had average LOS of 4.6 and 4.6 in periods 1 and 2 and mean post-surgical LOS was 3.9 and 3.8 for periods 1 and 2. Mean (SD) total costs for TA patients were significantly higher, $28,601 ($31,892) in period 1 and $32,751 ($38,194) in period 2, compared to $15,336 ($33,406) and $15,412 ($20,311) for patients not receiving TA. Predictors for significantly higher risk of TA use included General Surgery, Non-cardiac Thoracic procedures, bed-size under 500 or Rural, and Staples or Non-absorbable sutures usage. **CONCLUSIONS:** These findings suggest minimal impact on the SSI economic burden indicated by similar trends in antimicrobial utilization, costs and LOS over time. Further studies are warranted assessing the role of innovative technology to improve patient outcomes while reducing antibiotic utilization and LOS.